IN THE SPECIFICATION AMEND:

Please replace the sub-paragraph beginning at page 2, line 25, with the following replacement sub-paragraph:

--Fig. 1 is a wiring diagram illustrating a potential AC power distribution panel providing power to a plurality of branch circuits through their respective circuit interrupting devices ~~device~~;--

Please replace the paragraph beginning at page 4, line 8, with the following replacement paragraph:

--The present system for locating a circuit interrupter associated with a particular branch circuit is comprised of two separate devices, a receiver and a passive transmitter. The transmitter generates an identification signal that is coupled to the power line, and may additionally have the functionality of a receptacle analyzer and an optional GFCI (ground fault circuit interrupter) tester. The receiver detects the identification signal generated by the transmitter in order to identify a particular branch circuit. The receiver may also have the ~~additionally~~ additional functionality of sensing live AC wiring.--

Please replace the paragraph beginning at page 5, line 4, with the following replacement paragraph:

--As long as power is supplied to either first lead 201 or second lead 202, passive transmitter 200 will create a current spike when connected to the branch circuit. On the positive half cycle of the AC wave, current through the circuit is initially blocked by the voltage controlled switch 228. Once the voltage across voltage controlled switch 228 reaches the breakover voltage of voltage controlled switch 228, the voltage controlled switch conducts current, thus allowing charge storage device 222 to charge. The voltage across charge storage device 222 quickly rises to the instantaneous level of the power line voltage imposed between leads 201 and 202, which has just reached the breakover voltage. The voltage quickly rises because the AC power line and voltage controlled switch 228 (in its "on" state) have a very low combined impedance ~~impedence~~. During the charging of the charge storage device 222, the current through charge storage device 222 is initially high. As the charge storage device charges, the current through voltage controlled switch 228 decreases. Once the current through voltage controlled switch 228 falls below a minimum holding current, voltage controlled switch 228 reverts to a blocking stage and the current stops being conducted. As a result, a current spike of very short duration is drawn through passive transmitter 200 and, thus through the particular branch circuit to which the passive transmitter is connected.--

Please replace the paragraph beginning at page 5, line 25, with the following

replacement paragraph:

--Discharge circuit ~~Circuit~~ 230 is connected in parallel with charge storage device 222. Once current is no longer being conducted through voltage controlled switch, the energy stored by charge storage device 222 is discharged through the discharge circuit 230. Because the leakage resistance of most devices that may be used as the charge storage device is too high to permit the charge storage device to discharge rapidly enough to generate a sufficient quantity of current spikes, discharge circuit ~~Circuit~~ 230 is utilized to remove the charge across charge storage device 222 so that subsequent current ~~spike~~ spikes may be generated.--

Please replace the paragraph beginning at page 8, line 15, with the following replacement paragraph:

--In a similar fashion, the third subcircuit 570 is connected between first lead 501 and third lead 503. Third subcircuit 570 may also include a diode 582, a charge storage device 585, and a voltage controlled switch 588 in series. The anode of diode 582 is operably connected in series with charge storage device 585 and the cathode of diode 582 to first lead 501. The first terminal 589 ~~587~~ of voltage controlled switch 588 is operably connected to third ~~second~~ lead 503 ~~502~~ and the second terminal 587 ~~589~~ of voltage controlled switch 588 is connected in series with charge storage device 585. Discharge circuit 590 includes a resisor 592 that is in parallel to charge storage device 585.--

Please replace the paragraph beginning at page 9, line 11, with the following replacement paragraph:

--In a preferred design, LED L1 is a green light, LED L2 is a red light, and LED L3 is a yellow light to aid in user identification of wiring. The different illumination patterns of LED's L1, L2, and L3 created by various wiring scenarios are ~~is~~ indicated in the following table:--

Please replace the paragraph beginning at page 10, line 15, with the following replacement paragraph:

--In order to receive the current spike signals generated by the associated transmitter unit, inductor L1 is connected in series with capacitor C14, which make up a series-resonant tuned circuit 612 with a resonant frequency defined according to the following formula:

~~f=1/(2*PI*(LC)0.5))~~ f =1/(2*PI*(LC)^.5)

Please replace the paragraph beginning at page 11, line 24, with the following replacement paragraph:

--When only R17 is in the circuit, the AC gain of op amp U3B is approximately 1.3~~-volts~~. When R13, R14, R16, or any combination thereof are switched in parallel with R17, the gain increases. Thus, the software within the microcontroller 670 effectively controls the gain of op amp U3B by switching resistors R13, R14 and R16 in and out. This capability allows the microcontroller 670 to detect HF signals over a wide dynamic range, using only low cost components.--

Please replace the paragraph beginning at page 11, line 30, with the following replacement paragraph:

--The non-inverting input of a comparator U2A connects to the output of U3B. The inverting input, as well as the output, of comparator U2A connects to an RC filter circuit 614 comprised of resistor R7 and capacitor C3. This RC circuit 614 has a time constant of about 0.5 seconds. In the absence of an HF signal, the non-inverting input of comparator U2A is at 5 volts. The open-collector output of comparator U2A will be turned "off" as long as its non-inverting input is more positive than the inverting input of U2A, allowing resistor R7 to charge capacitor C3 up to 5 volts. When an HF signal is present, HF pulses are amplified by op amps U3A and U3B, causing the output of op amp U3B to oscillate around the DC value of about 5 volts. During the negative portion of the pulses, whenever the instantaneous value of the voltage at the non-inverting input of comparator U2A dips below the voltage stored by capacitor C3 and sensed by the inverting input of comparator U2A, then the output stage of comparator U2A will turn on, tending to discharge capacitor C3. Once capacitor C3 has been sufficiently discharged that its voltage is no longer smaller than the voltage at the non-inverting input of comparator U2A, comparator U2A switches off its output stage. The capacitor C3 discharges quickly because the output of comapraton U2A is a saturated transistor to ground, while resistor R7 can only slowly charge capacitor C3 back up to 5 volts. Comparator U2A acts as a negative peak detector and rectifier that can generate output voltage continuously from 5 volts down to 0 volts. (While a discrete signal diode could substitute, there may be a dead band due to the forward voltage drop of the diode ~~diod~~ (0.7V). Such a dead band will minimize efficacy of the diode).--

Please replace the paragraph beginning at page 12, line 19, with the following replacement paragraph:

--Microcontroller port pin RB5 connects through resistor R6 to the peak detector output. When microcontroller 670 port pin ~~RB 5~~ RB5 is set by software as an input, its high impedance ~~impedence~~ has no effect on the peak detector. When port pin RB5 is set to an active-high output, current through resistor R6 rapidly charges capacitor C3 to its maximum voltage of 5 volts. This arrangement allows microcontroller 670 to reset capacitor C3 to 5 volts, which is necessary when switching gain ranges using port pins RB2, RB3, and RB4 as described above. When the gain is

increased, then the old peak value at the output of comparator U2A must be erased, so as to capture the new peak value in the new range of signal strengths. The output of comparator U2A is connected to analog input port AN0 of microcontroller 670. In the absence of an HF signal, the microcontroller 670 sees a signal of about 5 volts. The stronger the HF signal, the more that the voltage at AN0 decreases towards 0 volts. The microcontroller 670 ~~370~~ measures the relative strength of the HF signal at analog input AN0.--

Please replace the paragraph beginning at page 13, line 4, with the following replacement paragraph:

--The field detector circuit further includes an operational amplifier U3D. The inverting input circuit of op amp U3D is a high impedance circuit, toward facilitating detection of weak AC fields. The non-inverting input of op amp U3D connects to +5V ~~VR~~ and since the DC gain of U1 is about unity, the DC output level is approximately 5 volts. AC gain ~~is~~ based upon the nominal values shown is about 55, as determined by the ratio of resistor R27 to resistor R26. Capacitor C13 is intended to remove high frequency noise.--

Please replace the paragraph beginning at page 13, line 10, with the following replacement paragraph:

--60Hz signals are further amplified by operational amplifier U3C. Because of the high gain at op amp U3D, C12 is a DC blocking capacitor that prevents any input offset voltage at op amp U3D to be amplified by U3D's gain and resulting in a shift in the DC output at pin 14 away from the intended 5 [[4]] volt level.--

Please replace the paragraph beginning at page 15, line 11, with the following replacement paragraph:

--Fig. 7 is a flow chart of the low battery task program 700 operating. After a start state 701, the battery level is checked in step 702. If it is normal, step 703 returns control of the main receiver loop. If the battery is low, control passes to step 704 that sets a low battery loop counter. In the preferred embodiment, the loop counter is set to 3. In step 705, the LED is switched to a yellow color and the preselected sound pattern that indicates low battery is selected. After a predetermined delay in step 706, the LED and the sound pattern are turned off in step 707. The loop counter is then decremented by 1 in step 708. If the counter is 0, the power is shut off (step 710). If the counter is not 0, the LED is once again switched on and the preselected sound patterns is selected. In the preferred embodiment, steps 705-708 flash the LED and beep the buzzer three times time before shutting off the power.--

Please replace the paragraph beginning at page 16, line 3, with the following replacement paragraph:

--The flow chart of Fig. 9 depicts the voltage sensor operation (900). After a start state 901, the software checks the analog input voltage from the AC detector stage 630 (Fig. 6). As previously described with respect to the operation of field detector 630, the voltage at microcontroller 670 analog input AN2 ~~ANZ~~ decreases as the 60Hz field increases. In step 902, this input is compared against a preset threshold, and if the voltage has not fallen below the threshold, control is returned to the main receiver loop in step 903. If, however, a signal is detected, the LED is switched to a red color and the buzzer is turned on (step 904). The LED and buzzer are then flashed and beeped at a speed proportionate to the detected signal strength (step 905).--